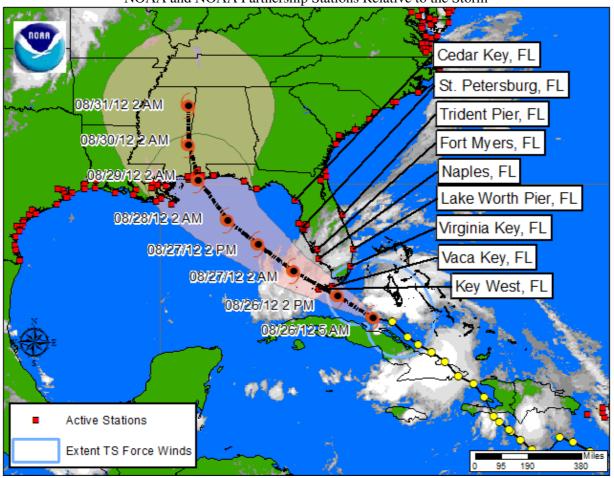


NOAA and NOAA Partnership Stations Relative to the Storm



## Storm Analysis

As of 08/26/2012 06:00 EDT, water levels in southeastern Florida and the Keys are elevated between 0.4 and 0.9 ft above predicted tide levels. Water levels along the western coast of Florida from Cedar Key to Naples have fallen 0.5 ft below predictions. Winds across southern Florida generally range between 10 and 25 knots with some gusts over 30 kts. Barometric pressure continues to fall across the region.

Water Level and Meteorological plots available below are updated automatically. Water level predictions relative to <u>Mean Lower Low Water</u> are:

Key West, FL: Next predicted high tides are 1.1 ft (0.34 m) at 08/26/2012 19:32 EDT and 2.1 ft (0.65 m) at 08/27/2012 06:47 EDT.

Vaca Key, FL: Next predicted high tides are 1.1 ft (0.34 m) at  $08/26/2012 \ 08:22 \text{ EDT}$  and 0.7 ft (0.21 m) at  $08/27/2012 \ 00:49 \text{ EDT}$ .

Virginia Key, FL: Next predicted high tides are 2.3 ft (0.70 m) at 08/26/2012 17:30 EDT and 2.3 ft (0.70 m) at 08/27/2012 05:46 EDT.

Lake Worth Pier, FL: Next predicted high tides are 3.2 ft (0.98 m) at 08/26/2012 16:35 EDT and 2.8 ft (0.88 m) at 08/27/2012 04:47 EDT.

Trident Pier, FL: Next predicted high tides are 4.3 ft (1.32 m) at 08/26/2012 16:12 EDT and 3.4 ft (1.06 m) at 08/27/2012 04:24 EDT.

Naples, FL: Next predicted high tides are 3.1 ft (0.93 m) at 08/26/2012 08:04 EDT and 2.3 ft (0.71 m) at 08/26/2012 22:47 EDT.

Fort Myers, FL: Next predicted high tides are 1.6 ft (0.49 m) at 08/26/2012 11:29 EDT and 1.0 ft (0.30 m) at 08/27/2012 02:11 EDT.

St. Petersburg, FL: Next predicted high tides are 2.6 ft (0.80 m) at 08/26/2012 09:18 EDT and 1.6 ft (0.51 m) at 08/27/2012 01:43 EDT.

Cedar Key, FL: Next predicted high tides are 3.9 ft (1.20 m) at 08/26/2012 09:13 EDT and 3.0 ft (0.92 m) at 08/27/2012 00:00 EDT.

For additional data, please see the <u>Center for Operational Oceanographic Products & Services</u> website. For information on Highest Astronomical Tide (HAT), NAVD88 and other datums, please see <u>Tidal Datums</u>. For more information or archived products and reports, please see the <u>Storm QuickLook</u> Homepage.

Analyst:DW			

### SELECT NATIONAL HURRICANE CENTER ADVISORY INFORMATION:

TROPICAL STORM ISAAC ADVISORY NUMBER 21 NWS NATIONAL HURRICANE CENTER MIAMI FL 500 AM EDT SUN AUG 26 2012

...ISAAC A LITTLE STRONGER...EXPECTED TO APPROACH THE FLORIDA KEYS LATER TODAY...HURRICANE WATCH ISSUED FOR PART OF THE NORTHERN GULF COAST...

WATCHES AND WARNINGS

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CHANGES WITH THIS ADVISORY...

A HURRICANE WATCH HAS BEEN ISSUED FROM THE MOUTH OF THE MISSISSIPPI RIVER EASTWARD TO INDIAN PASS FLORIDA...NOT INCLUDING METROPOLITAN NEW ORLEANS.

THE TROPICAL STORM WARNING HAS BEEN EXTENDED NORTHWARD AND WESTWARD ALONG THE FLORIDA WEST COAST AND THE FLORIDA PANHANDLE TO INDIAN PASS.

THE GOVERNMENT OF THE BAHAMAS HAS DISCONTINUED THE TROPICAL STORM WARNING FOR THE TURKS AND CAICOS ISLANDS.

SUMMARY OF WATCHES AND WARNINGS IN EFFECT...

A HURRICANE WARNING IS IN EFFECT FOR...

- \* THE FLORIDA KEYS INCLUDING THE DRY TORTUGAS
- \* THE WEST COAST OF FLORIDA FROM BONITA BEACH SOUTHWARD TO OCEAN REEF
- \* FLORIDA BAY
- \* ANDROS ISLAND IN THE BAHAMAS

#### A HURRICANE WATCH IS IN EFFECT FOR...

- \* THE FLORIDA EAST COAST FROM GOLDEN BEACH SOUTHWARD TO OCEAN REEF
- $\ast$  THE MOUTH OF THE MISSISSIPPI RIVER TO INDIAN PASS FLORIDA...NOT INCLUDING METROPOLITAN NEW ORLEANS

#### A TROPICAL STORM WARNING IS IN EFFECT FOR...

- \* CUBAN PROVINCES OF CIEGO DE AVILA...SANCTI SPIRITUS...VILLA CLARA...CAMAGUEY...LAS TUNAS...GRANMA...HOLGUIN...SANTIAGO DE CUBA...AND GUANTANAMO
- \* THE BAHAMAS EXCLUDING ANDROS ISLAND
- \* THE FLORIDA EAST COAST FROM SEBASTIAN INLET SOUTHWARD TO OCEAN REEF
- \* LAKE OKEECHOBEE
- \* THE FLORIDA WEST COAST AND THE FLORIDA PANHANDLE FROM NORTH OF BONITA BEACH TO INDIAN PASS...INCLUDING TAMPA BAY

#### A TROPICAL STORM WATCH IS IN EFFECT FOR...

- \* CUBAN PROVINCES OF MATANZAS AND CIENFUEGOS
- \* THE FLORIDA EAST COAST NORTH OF SEBASTIAN INLET TO FLAGLER BEACH

A HURRICANE WARNING MEANS THAT HURRICANE CONDITIONS ARE EXPECTED SOMEWHERE WITHIN THE WARNING AREA...IN THIS CASE WITHIN THE NEXT 24 HOURS. PREPARATIONS TO PROTECT LIFE AND PROPERTY SHOULD BE RUSHED TO COMPLETION.

A HURRICANE WATCH MEANS THAT HURRICANE CONDITIONS ARE POSSIBLE WITHIN THE WATCH AREA. A WATCH IS TYPICALLY ISSUED 48 HOURS BEFORE THE ANTICIPATED FIRST OCCURRENCE OF TROPICAL-STORM-FORCE WINDS...CONDITIONS THAT MAKE OUTSIDE PREPARATIONS DIFFICULT OR DANGEROUS.

A TROPICAL STORM WARNING MEANS THAT TROPICAL STORM CONDITIONS ARE EXPECTED SOMEWHERE WITHIN THE WARNING AREA WITHIN 36 HOURS.

A TROPICAL STORM WATCH MEANS THAT TROPICAL STORM CONDITIONS ARE POSSIBLE WITHIN THE WATCH AREA...GENERALLY WITHIN 48 HOURS.

INTERESTS IN THE REMAINDER OF CUBA...THE REMAINDER OF FLORIDA...AND THE REMAINDER OF THE NORTHERN GULF COAST SHOULD MONITOR THE PROGRESS OF ISAAC.

FOR STORM INFORMATION SPECIFIC TO YOUR AREA IN THE UNITED STATES...INCLUDING POSSIBLE INLAND WATCHES AND WARNINGS...PLEASE MONITOR PRODUCTS ISSUED BY YOUR LOCAL NATIONAL WEATHER SERVICE FORECAST OFFICE. FOR STORM INFORMATION

SPECIFIC TO YOUR AREA OUTSIDE THE UNITED STATES...PLEASE MONITOR PRODUCTS ISSUED BY YOUR NATIONAL METEOROLOGICAL SERVICE.

#### **DISCUSSION AND 48-HOUR OUTLOOK**

\_\_\_\_\_

AT 500 AM EDT...0900 UTC...THE CENTER OF TROPICAL STORM ISAAC WAS LOCATED NEAR LATITUDE 23.1 NORTH...LONGITUDE 79.0 WEST. ISAAC IS MOVING TOWARD THE NORTHWEST NEAR 18 MPH. A WEST- NORTHWESTWARD TO NORTHWESTWARD MOTION IS EXPECTED DURING THE NEXT 48 HOURS WITH A GRADUAL DECREASE IN FORWARD SPEED. ON THE FORECAST TRACK...THE CENTER OF ISAAC IS EXPECTED TO MOVE JUST NORTH OF THE NORTH COAST OF CUBA THIS MORNING...MOVE NEAR OR OVER THE FLORIDA KEYS LATER TODAY AND TONIGHT...AND MOVE INTO THE EASTERN GULF OF MEXICO ON MONDAY.

DATA FROM AN AIR FORCE RESERVE HURRICANE HUNTER AIRCRAFT INDICATE THAT MAXIMUM SUSTAINED WINDS HAVE INCREASED TO NEAR 65 MPH WITH HIGHER GUSTS. SOME ADDITIONAL STRENGTHENING IS FORECAST DURING THE NEXT 48 HOURS...AND ISAAC IS EXPECTED TO BE AT OR NEAR HURRICANE STRENGTH WHEN IT REACHES THE FLORIDA KEYS.

TROPICAL-STORM-FORCE WINDS EXTEND OUTWARD UP TO 205 MILES FROM THE CENTER.

THE LATEST MINIMUM CENTRAL PRESSURE REPORTED BY THE AIRCRAFT WAS 995 MB...29.38 INCHES.

#### HAZARDS AFFECTING LAND

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RAINFALL...TOTAL RAINFALL ACCUMULATIONS OF 4 TO 8 INCHES...WITH MAXIMUM AMOUNTS OF 12 INCHES...ARE POSSIBLE ACROSS THE FLORIDA KEYS...THE SOUTHERN PENINSULA OF FLORIDA AND PORTIONS OF CENTRAL AND EASTERN CUBA. TOTAL RAIN ACCUMULATIONS OF 3 TO 6 INCHES ARE POSSIBLE OVER THE CENTRAL AND SOUTHERN BAHAMAS.

WIND...TROPICAL STORM CONDITIONS ARE OCCURRING OVER PORTIONS OF EASTERN AND CENTRAL CUBA AND THE BAHAMAS AND THE TURKS AND CAICOS ISLANDS. HURRICANE CONDITIONS ARE EXPECTED ON ANDROS ISLAND ON SUNDAY. TROPICAL STORM CONDITIONS ARE POSSIBLE IN PORTIONS OF NORTHWESTERN CUBA BY LATE SUNDAY.

HURRICANE CONDITIONS ARE EXPECTED IN THE HURRICANE WARNING AREA IN SOUTHWEST FLORIDA AND THE FLORIDA KEYS TODAY...WITH TROPICAL STORM CONDITIONS EXPECTED LATER THIS MORNING. HURRICANE CONDITIONS ARE POSSIBLE IN THE HURRICANE WATCH AREA IN SOUTHEAST FLORIDA TODAY...WITH TROPICAL STORM CONDITIONS EXPECTED IN THE TROPICAL STORM WARNING AREA ALONG THE FLORIDA EAST COAST BY THIS MORNING. TROPICAL STORM CONDITIONS ARE EXPECTED TO SPREAD NORTHWARD ALONG THE WEST COAST OF FLORIDA AND INTO THE EASTERN FLORIDA PANHANDLE IN THE TROPICAL STORM WARNING AREA TONIGHT AND MONDAY.

HURRICANE CONDITIONS ARE POSSIBLE IN THE HURRICANE WATCH AREA ALONG THE NORTHERN GULF COAST ON TUESDAY...WITH TROPICAL STORM CONDITIONS POSSIBLE BY

#### MONDAY NIGHT.

STORM SURGE...THE COMBINATION OF A STORM SURGE AND THE TIDE WILL CAUSE NORMALLY DRY AREAS NEAR THE COAST TO BE FLOODED BY RISING WATERS. THE WATER COULD REACH THE FOLLOWING DEPTHS ABOVE GROUND IF THE PEAK SURGE OCCURS AT THE TIME OF HIGH TIDE...

- \* CRYSTAL RIVER THROUGH THE BIG BEND OF FLORIDA...4 TO 7 FT
- \* SOUTHWEST FLORIDA COAST WITHIN HURRICANE WARNING AREA...4 TO 6 FT
- \* FLORIDA WEST COAST FROM BONITA BEACH TO SOUTH OF CRYSTAL RIVER INCLUDING TAMPA BAY...3 TO 5 FT
- \* SOUTHEAST FLORIDA COAST AND THE FLORIDA KEYS...1 TO 3 FT
- \* CENTRAL AND EASTERN CUBA...1 TO 3 FT
- \* THE BAHAMAS...1 TO 3 FT

THE DEEPEST WATER WILL OCCUR ALONG THE IMMEDIATE COAST IN AREAS OF ONSHORE FLOW. SURGE-RELATED FLOODING DEPENDS ON THE RELATIVE TIMING OF THE SURGE AND THE TIDAL CYCLE...AND CAN VARY GREATLY OVER SHORT DISTANCES. FOR INFORMATION SPECIFIC TO YOUR AREA...PLEASE SEE PRODUCTS ISSUED BY YOUR LOCAL WEATHER SERVICE OFFICE. NEAR THE COAST...THE SURGE WILL BE ACCOMPANIED BY DANGEROUS WAVES.

TORNADOES...ISOLATED TORNADOES ARE POSSIBLE OVER PORTIONS OF CENTRAL AND SOUTHERN FLORIDA AND THE FLORIDA KEYS ON SUNDAY.

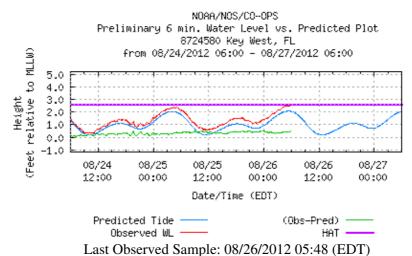
SURF...DANGEROUS SURF AND RIP CURRENT CONDITIONS WILL CONTINUE TO AFFECT THE BAHAMAS...THE TURKS AND CAICOS...EASTERN AND CENTRAL CUBA...THE FLORIDA PENINSULA AND THE FLORIDA KEYS DURING THE NEXT COUPLE OF DAYS. PLEASE CONSULT PRODUCTS FROM YOUR LOCAL WEATHER OFFICE FOR MORE INFORMATION.

#### FORECASTER BRENNAN

For the purpose of timely release, data contained within this QuickLook have undergone a "limited" NOS Quality Assurance/Control; however, the data have not yet undergone final verification. All data subject to NOS verification.

Jump to: Key West - Water Level, Key West - Barometric, Vaca Key - Water Level, Vaca Key - Winds, Vaca Key - Barometric, Virginia Key - Water Level, Virginia Key - Winds, Virginia Key - Barometric, Lake Worth Pier - Water Level, Lake Worth Pier - Water Level, Trident Pier - Water Level, Naples - Water Level, Naples - Winds, Naples - Barometric, Fort Myers - Water Level, Fort Myers - Winds, Fort Myers - Barometric, St. Petersburg - Water Level, St. Petersburg - Winds, St. Petersburg - Barometric, Cedar Key - Water Level, Cedar Key - Winds, Cedar Key - Barometric,

## Key West, FL - Return to List



Relative to MLLW: Observed: 2.53 ft. Predicted: 2.06 ft. Residual: 0.47 ft. Historical Maximum Water Level: Oct 24 2005, 3.14 ft. above MHHW

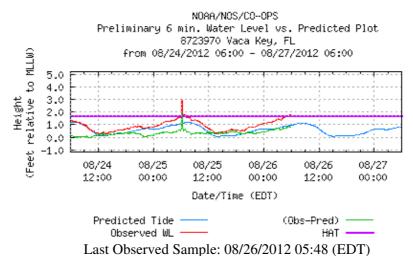
### Key West, FL - Return to List

NOAA/NOS/CO-OPS

Barometric Pressure Plot 8724580 Key West, FL from 08/24/2012 06:00 - 08/27/2012 06:00 1020 1018 1016 1014 1012 1010 1008 1006 08/24 08/25 08/25 08/26 08/26 08/27 12:00 00:00 12:00 00:00 12:00 00:00 Date/Time (EDT)

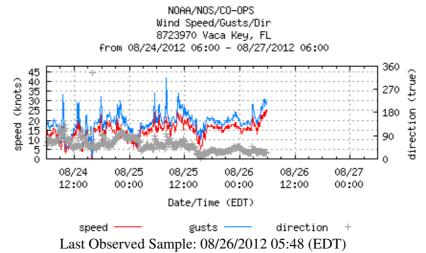
barometric pressure ——
Last Observed Sample: 08/26/2012 05:48 (EDT)
Barometric Pressure: 1005.7 mb

## Vaca Key, FL - Return to List



Relative to MLLW: Observed: 1.77 ft. Predicted: 0.94 ft. Residual: 0.83 ft. Historical Maximum Water Level: Oct 24 2005, 5.8 ft. above MHHW

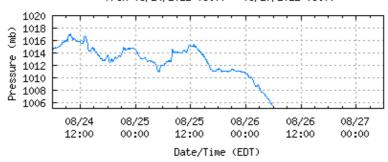
# Vaca Key, FL - Return to List



Wind Speed: 25 knots Gusts: 28 knots Direction: 25° T

## Vaca Key, FL - Return to List

NOAA/NOS/CO-OPS Barometric Pressure Plot 8723970 Vaca Key, FL from 08/24/2012 06:00 - 08/27/2012 06:00



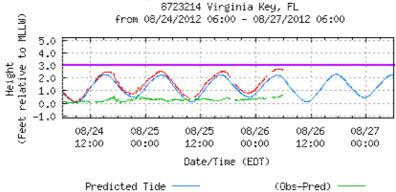
barometric pressure ——

Last Observed Sample: 08/26/2012 05:48 (EDT)

Barometric Pressure: 1005.5 mb

## Virginia Key, FL - Return to List

NOAA/NOS/CO-OPS
Preliminary 6 min. Water Level vs. Predicted Plot
8723214 Virginia Key, FL
from 08/24/2012 06:00 - 08/27/2012 06:00



Observed WL

Last Observed Sample: 08/26/2012 05:54 (EDT)

HAT

Relative to MLLW: Observed: 2.65 ft. Predicted: 2.00 ft. Residual: 0.65 ft. Historical Maximum Water Level: Oct 24 2005, 2.58 ft. above MHHW

# Virginia Key, FL - Return to List

NOAA/NOS/CO-OPS Wind Speed/Gusts/Dir 8723214 Virginia Key, FL from 08/24/2012 06:00 - 08/27/2012 06:00 360 45 40 35 30 25 20 15 0 speed (knots) 270 direction 180 08/24 08/25 08/27 08/25 08/26 08/26 12:00 00:00 12:00 00:00 12:00 00:00 Date/Time (EDT) direction speed gusts -

Last Observed Sample: 08/26/2012 05:54 (EDT) Wind Speed: 13 knots Gusts: 22 knots Direction: 48° T

## Virginia Key, FL - Return to List

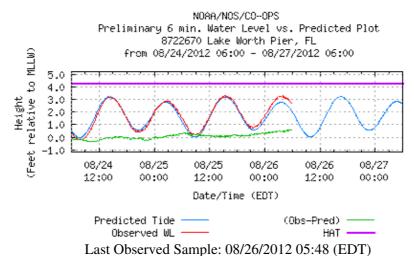
NOAA/NOS/CO-OPS Barometric Pressure Plot 8723214 Virginia Key, FL from 08/24/2012 06:00 - 08/27/2012 06:00



barometric pressure —— Last Observed Sample: 08/26/2012 05:54 (EDT)

Barometric Pressure: 1006.5 mb

### Lake Worth Pier, FL - Return to List



Relative to MLLW: Observed: 2.67 ft. Predicted: 2.13 ft. Residual: 0.54 ft. Historical Maximum Water Level: Nov 23 1984, 1.88 ft. above MHHW

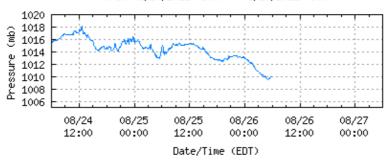
### Lake Worth Pier, FL - Return to List

NOAA/NOS/CO-OPS Wind Speed/Gusts/Dir 8722670 Lake Worth Pier, FL from 08/24/2012 06:00 - 08/27/2012 06:00 45 40 35 30 25 15 0 (true) speed (knots) 270 direction 180 08/24 08/25 08/26 08/26 08/27 08/25 12:00 00:00 12:00 00:00 12:00 00:00 Date/Time (EDT) gusts direction Last Observed Sample: 08/26/2012 05:48 (EDT)

Wind Speed: 25 knots Gusts: 31 knots Direction: 39° T

### Lake Worth Pier, FL - Return to List

NOAA/NOS/CO-OPS Barometric Pressure Plot 8722670 Lake Worth Pier, FL from 08/24/2012 06:00 - 08/27/2012 06:00



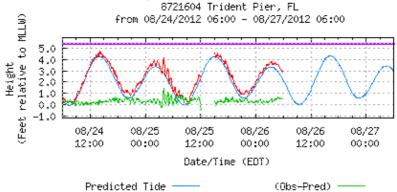
barometric pressure ----

Last Observed Sample: 08/26/2012 05:48 (EDT)

Barometric Pressure: 1010.0 mb

### Trident Pier, FL - Return to List

NOAA/NOS/CO-OPS
Preliminary 6 min. Water Level vs. Predicted Plot
8721604 Trident Pier, FL
from 08/24/2012 06:00 - 08/27/2012 06:00



Observed WL

Last Observed Sample: 08/26/2012 05:48 (EDT)

HAT

Relative to MLLW: Observed: 2.86 ft. Predicted: 2.31 ft. Residual: 0.55 ft. Historical Maximum Water Level: Sep 26 2004, 4.01 ft. above MHHW

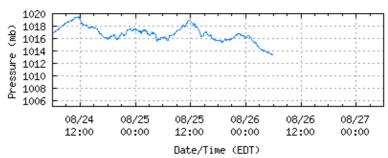
# Trident Pier, FL - Return to List

NOAA/NOS/CO-OPS Wind Speed/Gusts/Dir 8721604 Trident Pier, FL from 08/24/2012 06:00 - 08/27/2012 06:00 360 45 40 35 30 25 20 15 0 speed (knots) 270 direction 180 08/26 08/27 08/24 08/25 08/25 08/26 12:00 00:00 12:00 00:00 12:00 00:00 Date/Time (EDT) direction gusts speed

Last Observed Sample: 08/26/2012 05:48 (EDT) Wind Speed: 11 knots Gusts: 15 knots Direction: 32° T

## Trident Pier, FL - Return to List

NOAA/NOS/CO-OPS Barometric Pressure Plot 8721604 Trident Pier, FL from 08/24/2012 06:00 - 08/27/2012 06:00

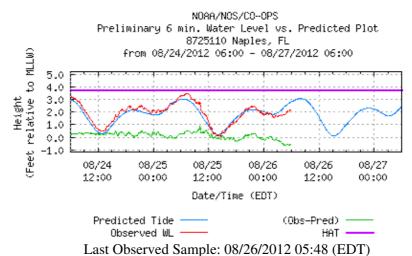


barometric pressure —

Last Observed Sample: 08/26/2012 05:48 (EDT)

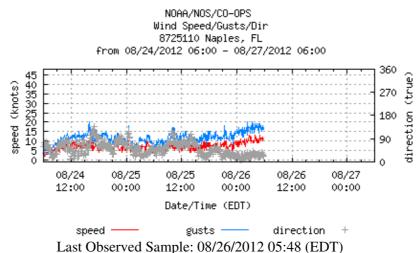
Barometric Pressure: 1013.4 mb

## Naples, FL - Return to List



Relative to MLLW: Observed: 2.20 ft. Predicted: 2.77 ft. Residual: -0.57 ft. Historical Maximum Water Level: Dec 21 1972, 3.11 ft. above MHHW

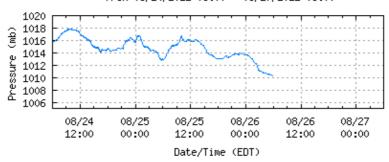
# Naples, FL - Return to List



Wind Speed: 11 knots Gusts: 16 knots Direction: 21° T

## Naples, FL - Return to List

NOAA/NOS/CO-OPS Barometric Pressure Plot 8725110 Naples, FL from 08/24/2012 06:00 - 08/27/2012 06:00



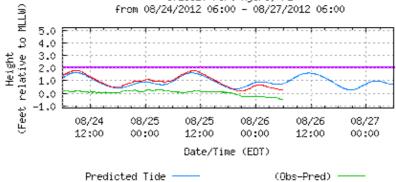
barometric pressure -

Last Observed Sample: 08/26/2012 05:48 (EDT)

Barometric Pressure: 1010.3 mb

### Fort Myers, FL - Return to List

NOAA/NOS/CO-OPS Preliminary 6 min. Water Level vs. Predicted Plot 8725520 Fort Myers, FL from 08/24/2012 06:00 - 08/27/2012 06:00



Observed WL

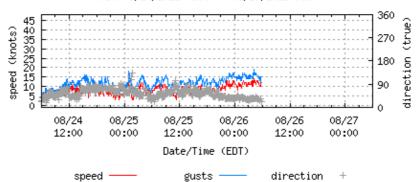
Last Observed Sample: 08/26/2012 05:48 (EDT)

HAT

Relative to MLLW: Observed: 0.24 ft. Predicted: 0.75 ft. Residual: -0.51 ft. Historical Maximum Water Level: Nov 23 1988, 3.41 ft. above MHHW

## Fort Myers, FL - Return to List

NOAA/NOS/CO-OPS Wind Speed/Gusts/Dir 8725520 Fort Myers, FL from 08/24/2012 06:00 - 08/27/2012 06:00

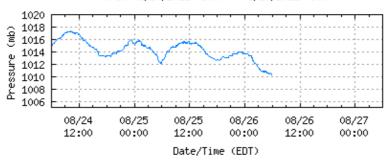


Last Observed Sample: 08/26/2012 05:48 (EDT)

Wind Speed: 12 knots Gusts: 15 knots Direction: 23° T

## Fort Myers, FL - Return to List

NOAA/NOS/CO-OPS Barometric Pressure Plot 8725520 Fort Myers, FL from 08/24/2012 06:00 - 08/27/2012 06:00

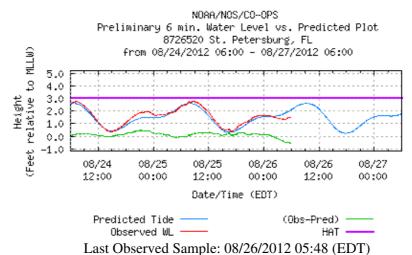


barometric pressure ----

Last Observed Sample: 08/26/2012 05:48 (EDT)

Barometric Pressure: 1010.3 mb

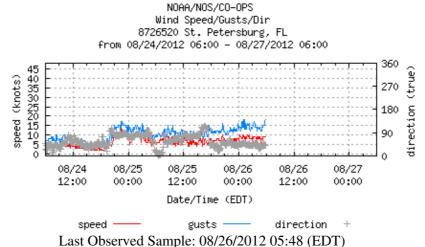
## St. Petersburg, FL - Return to List



Relative to MLLW: Observed: 1.52 ft. Predicted: 2.07 ft. Residual: -0.55 ft.

Historical Maximum Water Level: Aug 31 1985, 4 ft. above MHHW

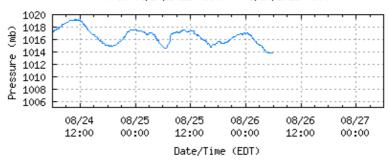
# St. Petersburg, FL - Return to List



Wind Speed: 9 knots Gusts: 18 knots Direction: 41° T

## St. Petersburg, FL - Return to List

NOAA/NOS/CO-OPS Barometric Pressure Plot 8726520 St. Petersburg, FL from 08/24/2012 06:00 - 08/27/2012 06:00



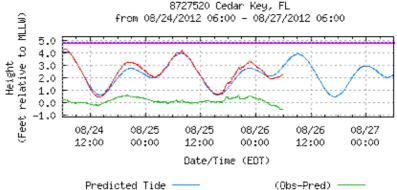
barometric pressure -

Last Observed Sample: 08/26/2012 05:48 (EDT)

Barometric Pressure: 1013.8 mb

### Cedar Key, FL - Return to List

NOAA/NOS/CO-OPS Preliminary 6 min. Water Level vs. Predicted Plot 8727520 Cedar Key, FL from 08/24/2012 06:00 - 08/27/2012 06:00



Observed WL

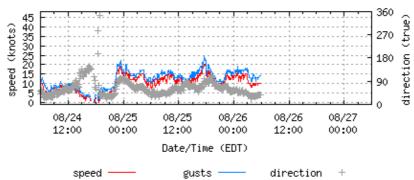
Last Observed Sample: 08/26/2012 05:48 (EDT)

HAT

Relative to MLLW: Observed: 2.26 ft. Predicted: 2.85 ft. Residual: -0.59 ft. Historical Maximum Water Level: Oct 7 1996, 5.15 ft. above MHHW

# Cedar Key, FL - Return to List

NOAA/NOS/CO-OPS Wind Speed/Gusts/Dir 8727520 Cedar Key, FL from 08/24/2012 06:00 - 08/27/2012 06:00

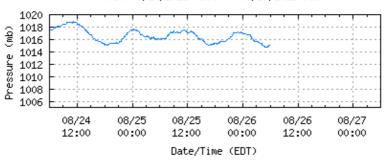


Last Observed Sample: 08/26/2012 05:48 (EDT)

Wind Speed: 10 knots Gusts: 14 knots Direction: 37° T

# Cedar Key, FL - Return to List

NOAA/NOS/CO-OPS Barometric Pressure Plot 8727520 Cedar Key, FL from 08/24/2012 06:00 - 08/27/2012 06:00



barometric pressure ----

Last Observed Sample: 08/26/2012 05:48 (EDT)

Barometric Pressure: 1015.0 mb

Center for Operational Oceanographic Products & Services (CO-OPS) | National Ocean Service (NOS) National Oceanic and Atmospheric Administration | U.S. Department of Commerce